

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 59212574
 PUBLICATION DATE : 01-12-84

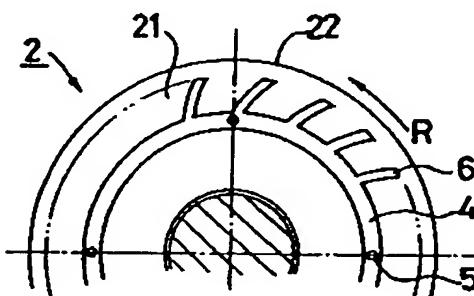
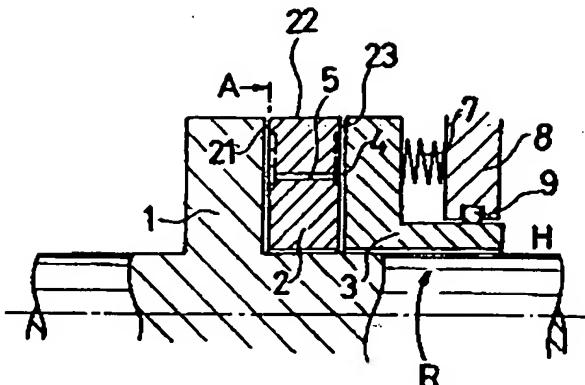
APPLICATION DATE : 19-05-83
 APPLICATION NUMBER : 58086617

APPLICANT : EBARA CORP;

INVENTOR : KATAOKA TADASHI;

INT.CL. : F16J 15/44

TITLE : FLOATED INTERMEDIATE RING TYPE
 NON-CONTACT SEAL



ABSTRACT : PURPOSE: To reduce the power loss and lower the sliding surface temperature by providing an intermediate ring having multiple spiral grooves and an annular groove on seal surfaces and communicating front and rear grooves via a communicating path between a rotary ring and a stationary ring.

CONSTITUTION: An intermediate ring 2 is provided between a rotary ring 1 and an elastically depressed stationary ring 3. Multiple spiral grooves 6 not opened to the seal surface end and an annular groove 4 communicated to the spiral grooves 6 are provided on seal surfaces 21, 23 of the intermediate ring 2 so as to communicate the front and rear annular grooves 4 via a communicating path 5. Thereby, when the intermediate ring 2 is being slid, the fluid is swallowed into the spiral grooves 6 and put into the annular groove 4 and pressed, thus generating a pressure corresponding to a load, and the slid resistance on both sliding surfaces becomes equal. Therefore, the intermediate ring 2 is rotated at a speed about one half of the shaft rotation speed, the power loss is reduced, and the sliding surface temperature is lowered.

COPYRIGHT: (C)1984,JPO&Japio